

D. Remarks

Claims 1-13 are pending. Claims 1-13 have been amended. Consideration of the amended claims is respectfully requested.

Objections

The Examiner has objected to the specification for containing the term [sic] at the bottom of page 12 and the top of page 13. In response, Applicant respectfully submits the attached substitute specification and abstract marked up to show all the changes from the originally submitted specification and abstract. For convenience, Applicant also submits a clean version of the specification. The substitute specification was submitted in Applicant's previous response of June 4, 2004. However, the Examiner noted that Applicant did not include a statement that no new matter was introduced by the substituted specification. Therefore, Applicant now states that no new matter has been added by the substitute specification.

Rejections Under 35 U.S.C. § 112

The Examiner has rejected claims 2-3 under 35 U.S.C. § 112, second paragraph as allegedly being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

The Examiner has rejected claims 2 and 3 under 35 U.S.C. § 112 alleging that the phrase "interrupted opposite" is unclear and states that the description of substantially connects is inconsistent with the description of interrupted. Applicant believes that the phrase "substantially connects" is not inconsistent with the phrase "interrupted opposite"

and that it merely indicates the conductive layer runs circumferentially through the tread. However to further clarify the subject matter which is regarded as the invention, Applicant has amended claims 1, 2 and 3 to remove reference to the phrase “substantially connects” and to indicate that the conductive layer runs circumferentially through the tread. In addition, Applicant has amended claims 2 and 3 to remove reference to the phrase “interrupted opposite” and to indicate that the at least one conductive layer has edges which are provided at a distance from at least one the lateral faces (claim 2) and that the conductive layer has a plurality of interruptions formed by circumferential grooves (claim 3). Support for these amendments is found in the substitute specification at page 9, paragraphs 0059-0062 and the figures. Therefore, Applicant respectfully requests withdrawal of this rejection.

The Examiner further alleges that in Claim 3, “so such” should be “such”. By Applicant’s amendment to claim 3, “so such” has been deleted from the claim.

#### Rejections under 35 U.S.C. § 102

The Examiner has rejected claims 1, 4-5 and 13 under 35 U.S.C. § 102(b) as allegedly anticipated by Fielding (U.S. Patent No. 2,342,576). The Examiner contends that Fielding, Fig. 5, shows a conductive layer arranged between an upper layer of non-conducting, high resistivity material and a lower layer of non-conducting, high resistivity material. The Examiner further contends that Fielding teaches that the conductive layer joins the sidewalls, as claimed.

The present invention relates to a tread of a tire as illustrated in Fig. 1. The tread is

defined by a radially inner face 2 (intended to be facing the different reinforcements of a tire which are not shown in the figure), by a radially outer face 3 (intended to be in contact with the ground when traveling), and by two lateral faces 4 and 5 connecting together the two facing pairs of lateral edges 6, 7 and 8, 9 of faces 2 and 3. Fig. 1 further shows that the tread which is largely made up of an electrically insulating material, such as silica filled rubber, comprises, running along its circumference, a least one conductive layer 10, provided radially on both sides with insulating material. The tread may comprise a plurality of conductive layers.

Applicant wishes to point out that Fielding discloses a construction where a conductive layer is placed between a tread and a carcass. Fielding specifically teaches that the conductive layer underlies the tread (*see* first page, second column, lines 49-50). It is further taught in Fielding that the tire is made by building a tire carcass, placing the conductive layer upon this carcass, and then placing the tread material over the conductive material. (*See* second page, first column, lines 51-55). In addition, Fig. 5 of Fielding relates to a solid tire (*see* first page, second column, lines 18-20), not a tread of a pneumatic tire. In contrast, claim 1 relates to a tread of a pneumatic tire which comprises a conductive layer, wherein the insulating material is provided radially on both sides of the layer, not to a solid tire which includes a conductive layer or to a conventional tread laid over the conductive layer placed on the carcass, as taught by Fielding. Accordingly, Fielding does not anticipate claim 1. Therefore, Applicant respectfully requests withdrawal of the rejection of claims 1-3 under 35 U.S.C. § 102(b) as anticipated by Fielding.

The Examiner has rejected claims 4-13 under 35 U.S.C. § 102(a) as being allegedly anticipated by Japan '415. Applicant previously submitted a translation of the priority document for the above-referenced patent application and asserted that the claims are not anticipated by Japan '415 because Japan '415 does not antedate the claimed subject matter. The Examiner contends that Japan '415 is prior art as to claims 11-12 because these claims are not supported by the English translation of the priority document. The Examiner also contends that Japan '415 is prior art as to claims 4-10 and 13 because these claims depend from claim 2 which is allegedly also not supported by the English translation of the priority document.

Applicant respectfully traverses the rejection and again assert that Japan '415 is not available as § 102(a) art against the present invention because the claimed subject matter is fully supported by the priority document which was previously provided to the Examiner in Applicant's Response dated June 4, 2004. Specifically, Applicant asserts that the subject matter of claim 11 and 12 is supported in the English translation of the priority document at page 8, lines 16-22. Applicant further asserts that the subject matter of claim 2, as well as claims 4-10 and 13, are also supported by the English translation of the priority document. Claim 2 is supported, for example, on page 9, lines 9-12. Claims 4-7 are supported on page 7, lines 7-22. Claims 8-10 are supported on page 8, lines 16-22. Accordingly, Applicant respectfully requests withdrawal of the rejection of claims 4-13 under 35 U.S.C. § 102(a) as anticipated by Japan '415.

Rejections Under 35 U.S.C. § 103(a)

The Examiner has rejected claims 6 and 7 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Fielding. As to claim 6, the Examiner contends that it would have been obvious to one of ordinary skill in the art to locate the conductive layer at the recited distance from the tread surface. As to claim 7, the Examiner contends that the specific resistivities would have been obvious in view of Fielding's teaching to make a static resistant tire. For the reasons stated above, and particularly based on Applicant's arguments that Fielding teaches a solid tire, whereas Applicant's claims are directed to a tread for a pneumatic tire, Applicant asserts that Fielding does not render claims 6 and 7 obvious and respectfully requests withdrawal of the rejection of the claims.

The Examiner has rejected claims 2 and 3 under 35 U.S.C. § 103(a) as being allegedly unpatentable over Japan '415 in view of Aoki (U.S. Patent No. 5,397,616) or Europe '229 (EP 732229). The Examiner contends that it would have been obvious to mold the multilayer tread of Japan '415 such that the claimed "interruptions" are provided when looking to Aoki, which allegedly teaches molding circumferential grooves in a tread such that the lower tread layer is exposed for the benefit of preventing cracks, or when looking to Europe '229, which allegedly teaches forming circumferential grooves in a tread having a conductive layer and a silica filled rubber layer. Applicant respectfully traverses the rejection.

As noted above, Japan '415 is not available as prior art. Therefore, it cannot not be combined with another reference for the purpose of rejecting the claims under 35 U.S.C. §

103(a). Therefore, Applicant respectfully requests withdrawal of the rejection under 35 U.S.C. § 103(a) as unpatentable over Japan '415 in view of Aoki or Europe '229.

The Examiner has rejected claims 1, 4-8 and 11-13 as being allegedly unpatentable over Verbrugghe (WO 98/38050) in view of Great Britain '757 (GB 544757). The Examiner contends that Verbrugghe discloses a tread having an insulating layer 8 and an insulating layer 9 with a conducting insert 11 extending through the layer 8 and conducting insert 12 extending through the layer 9. The Examiner then states that Verbrugghe does not recite a conducting layer between the layers 8 and 9 so as to extend from one side face of the tread to another side face of the tread. The Examiner then alleges that it would be obvious to the skilled artisan to coat the upper and lower layers of Verbrugghe's tread with the conducting rubber cement of Great Britain '757.

Applicant respectfully traverses the rejection. As Applicant has previously noted, in stark contrast with the presently claimed invention, Verbrugghe relates to a tire in which the radially upper ply of the tread includes a vertical "fin" 11 (referred to in Verbrugghe as a ring-shaped insert) perpendicular to the surface of the running tread, which makes the upper ply conductive. *See* the Abstract. In addition, Verbrugghe discloses that the crown reinforcement 9 and the body reinforcement 1 are made conductive by a conductive mix which coats the cables and that the reinforcements are separated by a profile 6 made of a rubber mix slightly filled with silica. Verbrugghe further includes a conductive connection of electric charges which connects the running tread to the mounting rim, the connection being two conductive plies (or plies being made conductive) 8, 9 and 1, separated by a non-

conductive ply 7 and 6, which are linked by the connection to become conductive.

Accordingly, moving from external to internal, the tire of Verbrugghe essentially has a conductive upper ply 8, which contacts the surface of a road, followed by a nonconductive ply 7 (8 and 7 being part of the tread), followed by another conductive reinforcement 9, followed by another nonconductive ply 6 (9 and 6 not being part of the tread), and followed by another conductive reinforcement, providing for a tire with alternating conductive and nonconductive layers which Verbrugghe accomplishes, at least in part, by the inclusion of a vertical fin in the upper ply 8. Verbrugghe, as noted by the Examiner, does not teach a conducting layer “between non-conducting layers so as to extend from one side face of the tread to another side face of the tread”.

The Examiner contends that the conductive rubber cement of GB ‘757, when combined with Verbrugghe to coat the layers of the tread, makes the present invention obvious. GB ‘757 relates to a rubber cement composition that is electrically conductive. This composition is applied to the inner and outer surfaces of various layers of a tire to provide a reduction in the resistance from the ground to the rim of the tire. Applicant previously asserted that the skilled artisan looking to GB ‘757 would conclude, at best, that the rubber cement composition should be applied to the inner and outer surfaces of the tread of Verbrugghe, not internally in the tread.

There is no teaching whatsoever in Great Britain ‘757 of including the conductive rubber cement composition within a tread such that it runs circumferentially through the tread. In fact, Great Britain ‘757 specifically teaches that the composition is applied to the

outside of a tire casing (page 2, lines 92-93); to the inner wall of a tire casing (page 3, lines 10-11); the inner wall of the carcass (page 3, lines 24-26); and in addition to at least one of these locations, to the walls which form the grooves of the tread (page 3, lines 34-36).

Therefore, the combination of Verbrugghe and Great Britain '757 at best teaches a tire with a tread having a conducting layer running vertically therethrough (Verbrugghe) with a conductive rubber cement layer applied circumferentially to the inner or outer surfaces of the tire. The combination does not teach a tread having a conductive layer running circumferentially therethrough wherein the conductive layer is provided with insulating material radially on both sides (claims 1-12). Nor does the combination teach a tire comprising such a tread (claim 13). Applicant therefore respectfully requests withdrawal of the rejection of claims 1, 4-8 and 11-13 under 35 U.S.C. § 103(a) as unpatentable over Verbrugghe in view of Great Britain '757.

The Examiner has reiterated his rejection of claims 2-3 as being allegedly unpatentable over Verbrugghe in view of Great Britain '757 and optionally Aoki or Europe '229. As noted above, Verbrugghe discloses a tread having two insulating layers having a conducting strip insert extending through each layer, but does not disclose providing a conductive layer between the two insulating layers. The Examiner then alleges that it would have been obvious to coat the surfaces of the upper and lower layers of the tread of Verbrugghe with a conducting rubber cement of GB '757 to provide a conducting layer between the two insulating layers and that Aoki or Europe '229 provide the teaching of the claimed interruptions.



The Examiner alleges that it would have been obvious to mold the multilayer tread of Verbrugghe such that the claimed interruptions are provided in view of Aoki's suggestion to mold circumferential grooves and Europe '229's suggestion to form circumferential grooves in a tread having a conductive layer.

Applicant respectfully traverses this rejection of claims 2-3 under 35 U.S.C. § 103(a). The Examiner contends that Verbrugghe, when viewed together with Great Britain '757, recites the limitations of claim 1, which Applicant has respectfully traversed above. The Examiner further asserts that Aoki and EP '229 provide the claimed interruptions of dependent claims 2 and 3. However, looking to Aoki and EP '229 to provide the claimed interruptions does not provide the missing claim elements which are not found in Verbrugghe and GB '757, namely a conductive layer running circumferentially through a tread, wherein the conductive layer is provided with insulating material on both sides. Accordingly, Applicant respectfully requests withdrawal of the rejection of the claims under 35 U.S.C. § 103(a) as unpatentable over Verbrugghe in view of GB '757 and Aoki or EP '229.

The Examiner has further rejected claims 8-10 under 35 U.S.C. § 103(a) as being unpatentable over Verbrugghe in view of Great Britain '757 as applied further in view of Gerresheim et al. (US 5,942,069). The Examiner alleges that it would have been obvious to apply the lateral faces of the tread with the claimed conductive strips in view of Gerresheim, which the Examiner alleges suggests improving conductivity and thereby static charge by arranging conductive layers on the lateral faces of the tread.

Applicant respectfully traverses the rejection. As noted above, Verbrugghe and Great Britain '757 do not provide the claim elements of the claims from which claims 8-10 depend (claims 1-3), namely a conductive layer running circumferentially through a tread, wherein the conductive layer is provided with insulating material on both sides. In addition, Gerresheim does not remedy the deficiencies of Verbrugghe and Great Britain '757. Accordingly the combination of Verbrugghe, Great Britain '757 and Gerresheim does not teach each and every element of claims 8-10 and therefore cannot render the claims obvious. Therefore, Applicant respectfully requests withdrawal of the rejection of claim 8-10 under 35 U.S.C. § 103(a).

The Examiner has indicated that Figures 1 and 2 of the certified copy of the priority document were missing. Applicant believes that these Figures were included in the certified copy when it was submitted. For the Examiner's convenience, Applicant submits herewith another certified copy of the priority document which includes Figures 1 and 2.

Attorney Docket No. 03161.001086

E. Conclusion

In view of the foregoing remarks, favorable reconsideration and allowance of all pending claims is earnestly solicited. Applicant's undersigned attorneys may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our below listed address.

Respectfully submitted,



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